

Work Order ID 100643

April-25-13 8:37:05 AM

100643

Page 1

Item ID: D2580-1

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: 205 Bent Tube

Start Date: 4/25/13 Start Qty: 4.00

4

Cust Item ID:

Required Date: 5/09/13 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: MLS

Date: B-04-25 Tooling:

Date:

Run Start *NR1*

QC:

Date: SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D2580

E

100

0.00

100

Skid tubes

Memo

0.00

Skid tubes

1- Inspect mat'l D2500-1-190 for damage.

2-Drill pilot holes using drill jig DT 8149 A-BC-D

3-Open holes to 0.508" as per Dwg D2580

4-Deburr holes per QSI002 section 4.2.3 and blow out all chips from inside of tube

5- Test fit inspection saddles on FWD & AFT saddle holes.

4 SAO 13-04-25

101

QC6- Inspect dimensions to drawing

0.00

101

QC

Memo

0.00

Quality Control

27

B425

4

Work Order ID 100643

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100643

Page 2

Item ID: D2580-1

Revision ID:

Item Name: 205 Bent Tube

Start Date: 4/25/13 Start Qty: 4.00

Required Date: 5/09/13 Req'd Qty: 4.00

Reference:

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Cust Item ID:

Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

110 Chemical Conversion Coat per QSI005 4.1

0.00

110

HandFinish

Memo

0.00

Hand Finishing

4 SMO 1304-26

120 QC7-Inspect Chemical Conversion Coat

0.00

120

QC

Memo

0.00

Quality Control

Shp
13426

4

125

0.00

125

Skid tubes

Memo

0.00

Skid tubes

1- Bond web in place per QSI 015.

A/R Sikaflex-291 batch: 711249/58
Sikaflex expire date: 01/10/2013
Start time and date: 8h15 bond for 12hrs

(4) SMO 1304-20

Work Order ID 100643

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100643

Page 3

Item ID: D2580-1

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: 205 Bent Tube

Start Date: 4/25/13 Start Qty: 4.00

4

Cust Item ID:

Required Date: 5/09/13 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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130 QC5- Inspect part completeness to step on W/O

0.00

130

QC

Memo

0.00

Quality Control

4 0 13-05-01



140 Identify as per dwg & Stock Location: L/G

0.00

140

Packaging

Memo

0.00

Packaging

-DC 13/05/01

150 QC21- Final Inspection - Work Order Release

0.00

150

QC

Memo

0.00

Quality Control

13/5/6

13-05-2

Picklist Print

April-25-13 8:37:09 AM

Page 1

Work Order ID: 400643

Parent Item: D2580-1

Parent Item Name: 205 Bent Tube

100643

D2580-1

Start Date: 4/25/13

Required Date: 5/09/13

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP B01.11.08 Revised Step 9, 10, 12, and 13 SM IPP Rev: C
10.12.01 as per DEO DI DD verfec

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2500-1-190

Manufactured

No

100

Each

54.0000

1

4

D2500-1-190

Ext'n - I' Beam Tube 4"

**

SAD 13-04-25

Location

Loc Qty

Loc Code

HALL

54

85483

2

91816

52

D2596

Manufactured

No

100

Each

7.0000

1

4

D2596

Web, 205 Skidtube

**

SAD 13-04-30

Location

Loc Qty

Loc Code

LG

7

80820

1

95599

2

99682

4

m 100367

(4)

LIST OF MATERIALS

ITEM	QTY -041	QTY -045	QTY -047	PART NUMBER	DESCRIPTION
1	X			D2580-041	SKIDTUBE ASSEMBLY
2		X		D2580-045	SKIDTUBE ASSEMBLY
3			X	D2580-047	SKIDTUBE ASSEMBLY
4	1	1	1	D2500-1-190	EXTRUSION
5			16	D2570	BUSHING
6	1	1	1	D2576-3	STEP
7	20	24	25	D2579	SPACER
8	16	16	8	D2594-1	PLUG
9	16	16	8	D2594-3	O-RING
10	1	1	1	D2596	205 WEB
11	1	1	1	D2855	AFT CAP
12	1	1		D3564-5	WEARSHOE
13	1	1		D3564-9	WEARSHOE
14	1	1		D3564-11	WEARSHOE
15	1	1		D3564-13	WEARSHOE
16	2	2		D3566-1	GASKET
17	1	1		D3566-5	GASKET
18	1	1		D3566-13	GASKET
19			1	D4406-041	WEARPLATE ASSEMBLY
20			1	D4406-043	WEARPLATE ASSEMBLY
21	50	50		ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
22	50	50		AN3C4A	BOLT
23	2	2	2	AN3-5A	BOLT
24			8	AN4-45A	BOLT
25	50	50		NAS1149C0332R	WASHER (AN960C10L)
26	2	2	2	NAS1149D0332J	WASHER (AN960JD10L)
27			8	MS21042-4	NUT (OR MS21042L4)

GENERAL NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB
POWDER COAT ASSEMBLY (-041/-047) GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
POWDER COAT ASSEMBLY (-045) GREEN SANDEX (REF 4.3.5.8) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D2580-041 = 34.5 lbs
D2580-045 = 34.5 lbs
D2580-047 = 37.7 lbs
- 8) WELDING PER DART QSI 004.
- 9) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 10) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 11) USE DART DRILL TEMPLATE DT8217 & DT8937 ONLY FOR D2580-041/-045 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTIONS B-B AND F-F (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND NAS1149C0332R WASHERS WITH SIKAFLEX-241-291.
- 12) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES FOR D2580-041/-045 AND 8 PLACES FOR D2580-047)
- 13) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

DEO ATTACHED

RELEASED

2011-08-29

SHIP
RETURN
ENGINEERING
DEPT

NO. 100-643 MJS
13-04-25

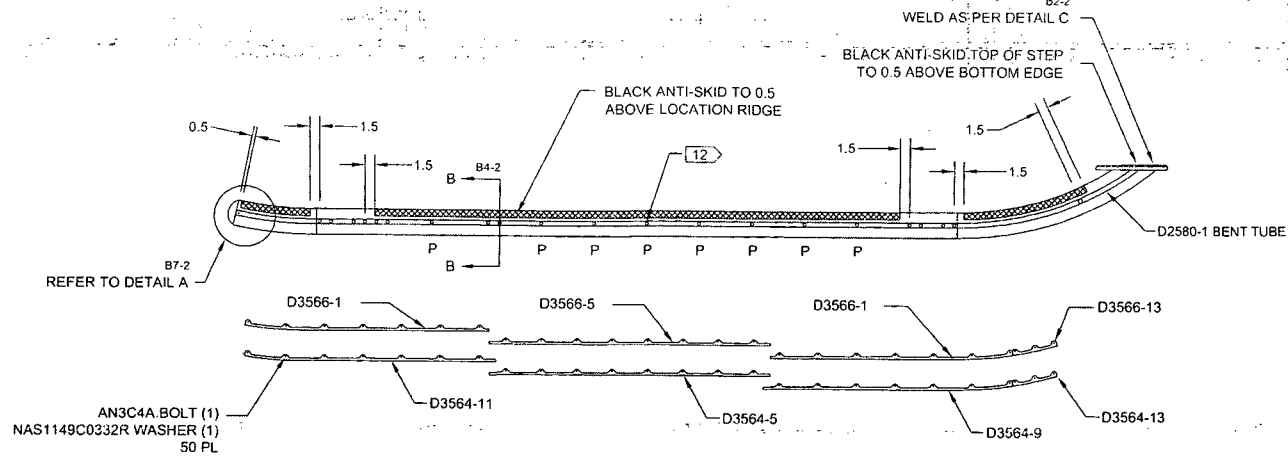
E	ADD D2580-047 (ZN C4-7) AND D2580-7 (ZN B3-8); INCLUDED DEO D2580-0-1; REFORMATTED DRAWING TO CURRENT STANDARDS; DT8217 & DT8937 WAS TD2577-205 (ZN C4-1)	RF	11.06.21
D	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/ 9183	PH	07.04.05
C	REDRAWN, INCLUDED DEO 9094/ 9097	CP	98.08.26
B	AS MANUFACTURED	DS	96.12.02
A	NEW ISSUE	DS	96.09.16
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN	RF		
CHECKED	10		
MFG. APPR.	10		
APPROVED	10		
DE APPR.	10		
DATE	11.06.21		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. D2580
REV. E
SHEET 1 OF 8
TITLE
SCALE
205 SKIDTUBE ASSEMBLY
NTS

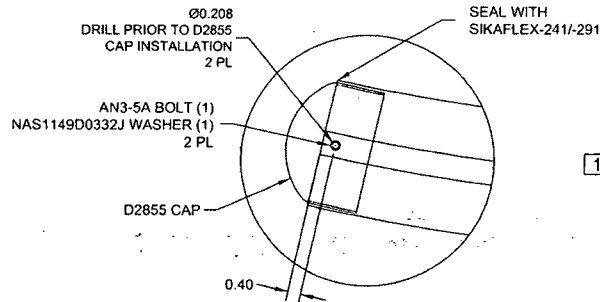
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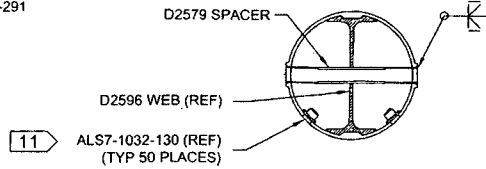


D2580-041 ASSEMBLY DETAIL

DETAIL A C7-2
SCALE 5X

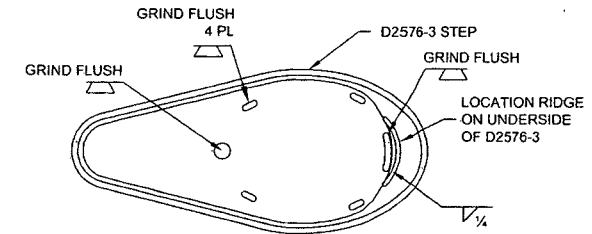


SECTION B-B D5-2
SCALE 5X



- AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:
1. CHAMFER HOLE 0.050 X 45°
 2. INSERT D2579 SPACER (20 PLACES)
 3. WELD INTO PLACE AND GRIND FLUSH
 4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

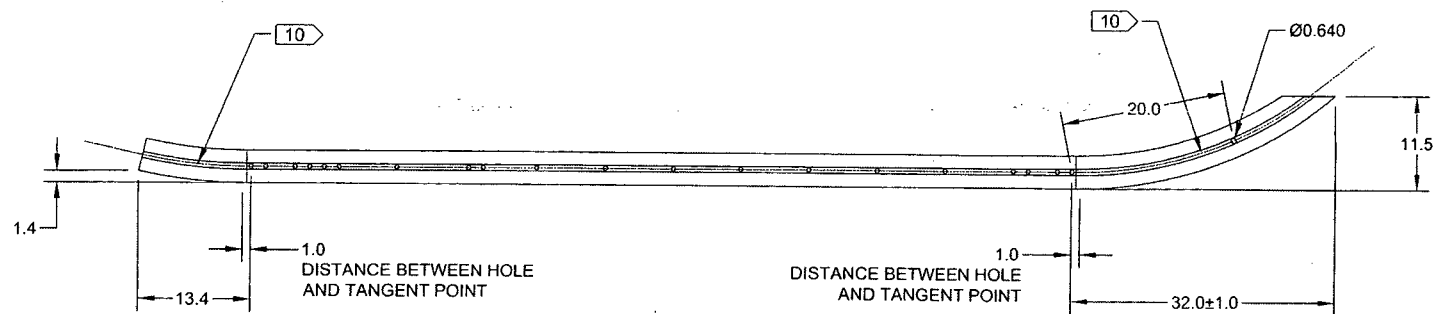
DETAIL C D3-2
SCALE 5X



DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	RF	DRAWING NO.	REV. E
MFG. APPR.	RF	D2580	SHEET 2 OF 8
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	205 SKIDTUBE ASSEMBLY	NTS
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2011-08-29
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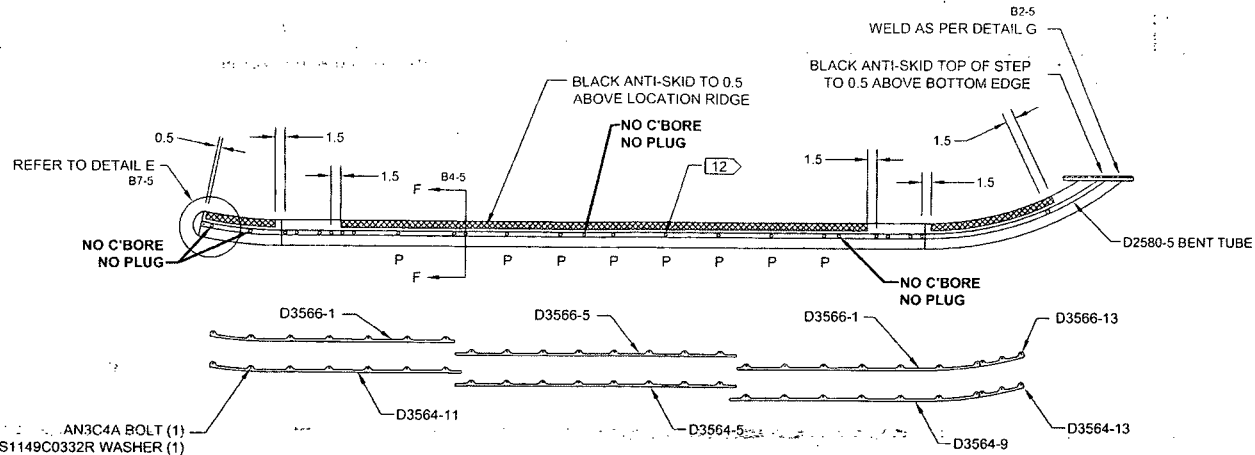
D2580-1 BENT TUBE
(MAKE FROM D2580-101 TUBE)

DEO ATTACHED

RELEASED
2011-08-28

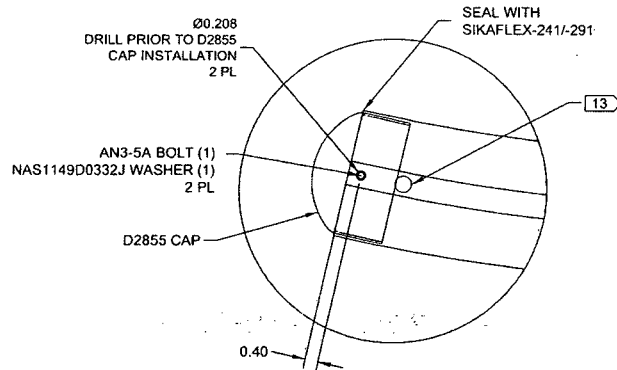
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DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	10	DRAWING NO.	REV. E
MFG. APPR.	10	D2580	SHEET 3 OF 8
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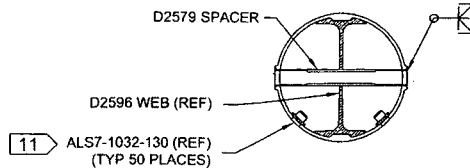


D2580-045 ASSEMBLY DETAIL

**DETAIL E D7-5
SCALE 5X**

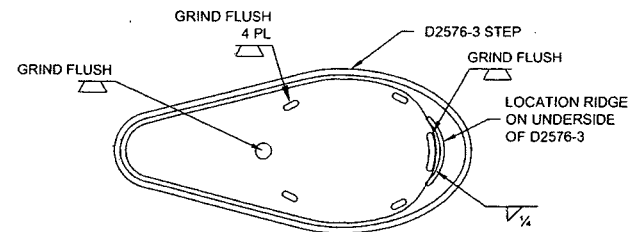


**SECTION F-F D5-5
SCALE 5X**



AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:
1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (24 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

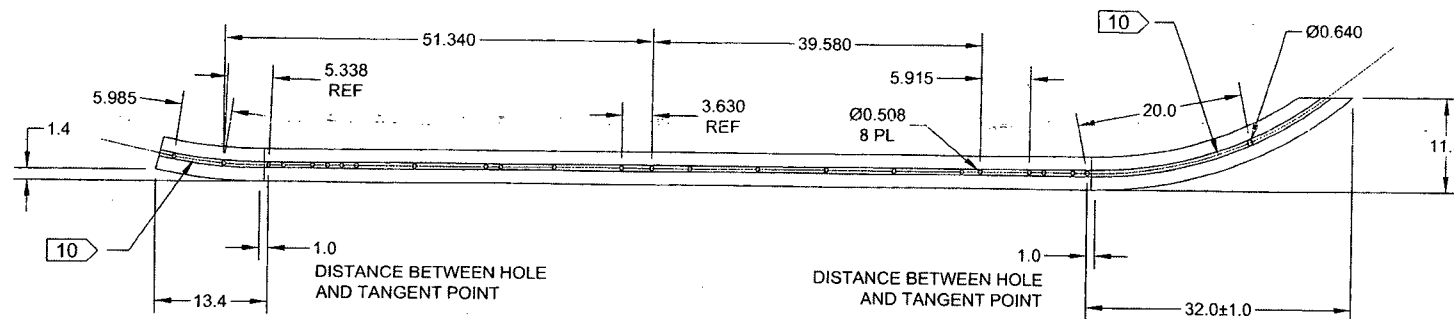
**DETAIL G D3-5
SCALE 5X**



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AM

DESIGN	4	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	10	DRAWING NO.	REV. E
MFG. APPR.	10	D2580	SHEET 4 OF 8
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DE APPR.	10	205 SKIDTUBE ASSEMBLY	NTS
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D2580-5 BENT TUBE
(MAKE FROM D2580-101 TUBE)

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2011-08-29

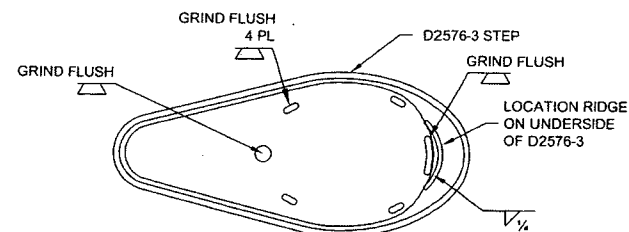
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DRAWN	RF		
CHECKED	10	DRAWING NO.	REV. E
MFG. APPR.	10	D2580	SHEET 5 OF 8
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D2580-047 ASSEMBLY DETAIL

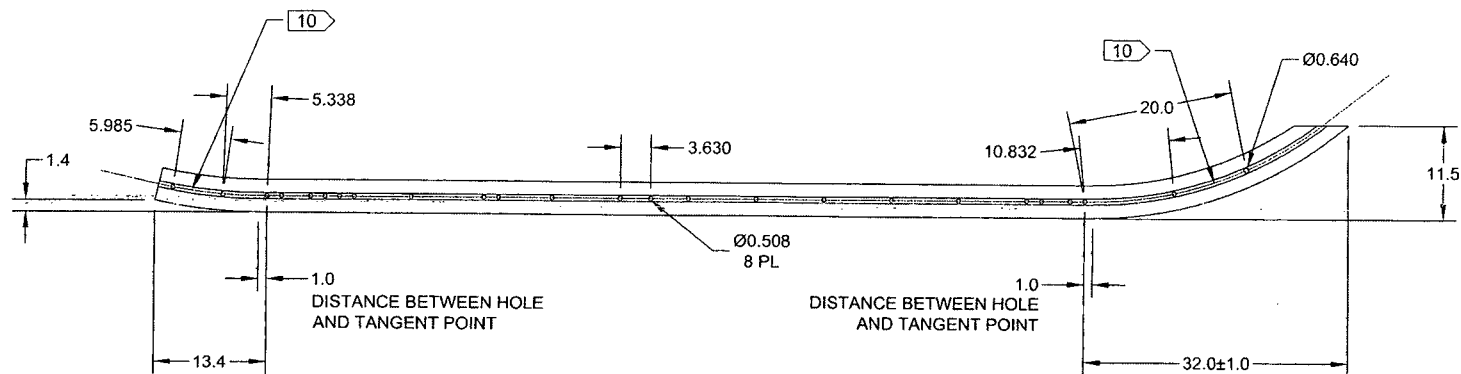
A cross-sectional view of the wheel assembly. It shows a central hub with a horizontal web and a vertical spacer. The web is labeled "D2596 WEB (REF)" and the spacer is labeled "D2579 SPACER". A bolt is shown passing through the web and spacer, secured with a nut and washer on the right side.

DETAIL J D3-7
SCALE 5X



DESIGN	A	DART AEROSPACE LTD HAWKSBURY, ONTARIO, CANADA DRAWING NO. D2580 TITLE 205 SKIDTUBE ASSEMBLY COPYRIGHT © 1996 BY DART AEROSPACE LTD. THIS DOCUMENT IS THE PROPERTY OF DART AEROSPACE LTD. THE EXPRESS OR IMPLIED WARRANTY THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.	REV. P	
DRAWN	RF		SHEET 6 OF 6	
CHECKED	NP			SCALE
MFG. APPR.	N			NT
APPROVED	NP			
DE APPR.	NP			
DATE	11.06.21			

100643



D2580-7 BENT TUBE
(MAKE FROM D2580-101 TUBE)

$\triangle E$

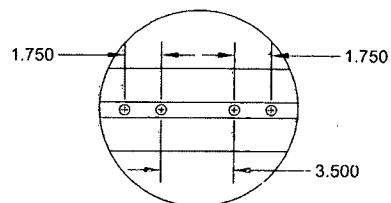
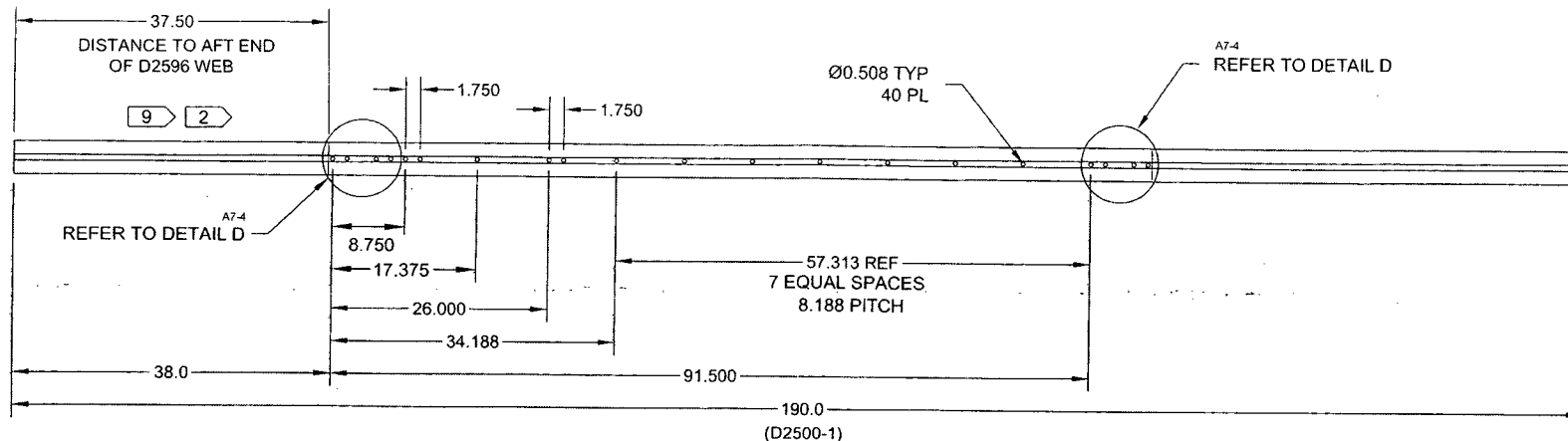
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RELEASE
2011-08-29

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DESIGN	#	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	10	DRAWING NO.	REV. #
MFG. APPR.	10	D2580	SHEET 7 OF 7
APPROVED	10	TITLE	SCALE
DE APPR.	#	205 SKIDTUBE ASSEMBLY	NT
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DETAIL D
SCALE 5X

D2580-101 TUBE

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2011-08-29

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MFG. APPR.	10	D2580	SHEET 8 OF 8
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DRAWING NO. D2580		TITLE DART AEROSPACE LTD 205 SKIDTUBE ASSEMBLY		REVISE		DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D2580-E-1		SHEET NO. SHEET 1 OF 1		SCALE NTS	
DRAWN		CHECKED		MFG. APPR.		APPROVED		DE APPR.					
DATE 11.12.13		DATE 11.12.13		DATE 11.12.13		DATE 11.12.13		DATE 11.12.13					

PURPOSE:

CHANGE ALL C'BORED WELDED CROSSBOLT SPACERS TO SWAGED SPACERS

CHANGE:

PARTS LIST IS AMENDED AS FOLLOWS:

WAS

QTY	QTY	QTY	PART NUMBER	DESCRIPTION
-041	-045	-047		
20	24	25	D2579	CROSS BOLT SPACER

IS

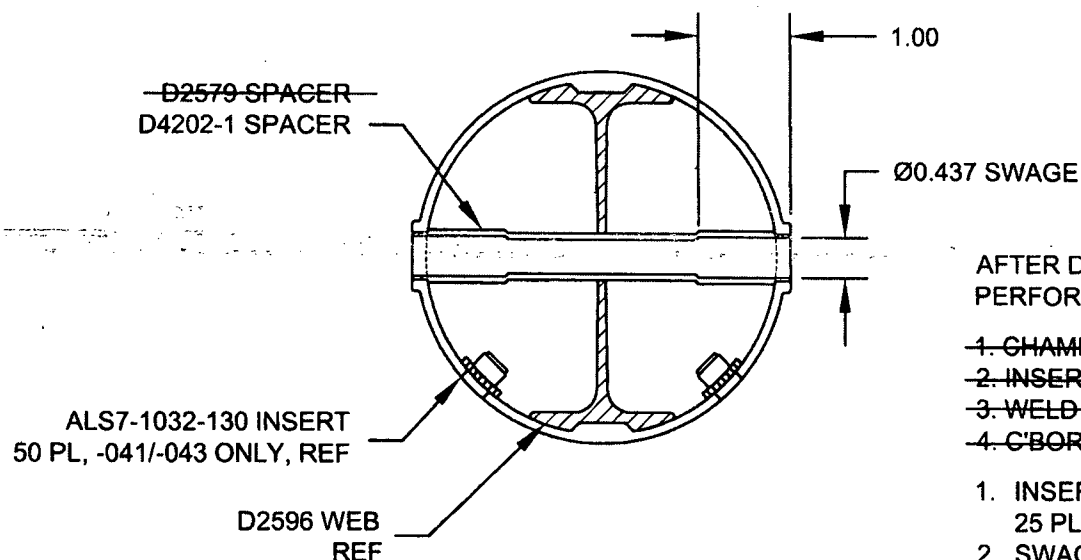
	4		* D2579	CROSS BOLT SPACER
20	20	25	D4202-1	SPACER

SECTION B-B, SECTION F-F, & SECTION I-I ARE AMENDED AS FOLLOWS
FOR ALL HOLES THAT WERE ORIGINALLY C'BORED:

*** FOR -045 SKIDTUBE ONLY:**

WELD 4X D2579 SPACERS PER DWG
IN LOCATIONS MARKED "NO C'BORE".
REF SHEET 4 OF DWG.

RELEASED
2011-12-16



AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

1. INSERT D4202-1 SPACER, 20 PL (-041) OR 20 PL (-045) OR 25 PL (-047)
2. SWAGE TO Ø0.437 X 1.00 DEEP PER QSI 002
3. TRIM / GRIND FLUSH PER QSI 002

SECTION B-B, F-F, I-I
NOT TO SCALE